



North Boulder Recreation Center



A LEED Silver Certificate Building

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Project Charter

- Replace existing pool, expand gymnastics and aquatics activities.
- Increase building area from 34,044 to 62,166 SF.
- Project Budget of \$11.6 Million.
- Obtain LEED Silver Certification.
- Minimize increase in fossil-fuel energy consumption by installing solar-hot water system.

Why Did Boulder Do LEED?

- Environmental Sustainability
- Reduce Greenhouse Gasses
- Determine Incremental Costs of LEED Options
- Possible Commercial Energy Code Change
- Recognized Standard for Public & Private Commercial Construction

Why We Would Do It Again

- Demonstrates our Commitment to Environmental Sustainability
- Develops Private Resources
- Addresses All Aspects of Construction
- USGBC Provides Resources
- Provides the Challenge To Attain Gold

Project Certification Categories

- Sustainable Sites
- Water Efficiency
- Energy and Atmosphere
- Materials and Resources
- Indoor Environmental Quality
- Innovation and Design Process

Sustainable Sites — 8 Pts.



Minimize Site
Disturbance



Reduce Heat Island Effect /
Reflective Roof Surface

Water Efficiency – 1 Pt.



Water Efficient Plant
Materials, Native Grasses, &
Drip Irrigation

Reduce consumption by 50%

Energy & Atmosphere – 7 pts.

- Solar Water Heating – 50% reduction in natural gas consumption.
- Wind Energy – 50% of Elec. Power provided by the Wind



View of Solar Collectors



Materials and Resources — 6 Pts.



Construction Waste Management

- Divert 82% of all Construction Waste



Local/Regional Materials

- 64% from local materials

Indoor Environmental Quality — 9 Pts.



- Composite Wood: Parallel Strand Lumber (PSL)
- All Urea-formaldehyde Free
- Recycled Carpet Backing
- Low Emitting Materials

Innovation and Design – 2 pts.

- Exemplary Use of Local Materials (64%)
- Use of LEED Accredited Professional (Architectural Energy Corp.)



LEED Costs

Description	Cost
Energy Modeling	\$ 32,950
Solar Hot Water	\$ 265,000
90% Efficient Boilers	\$ 32,000
Commissioning	\$ 24,259
Additional Commissioning	\$ 7,353
LEED Submission	\$ 17,720
Misc. LEED Upgrades	\$ 157,288
Total	\$ 536,570

LEED Benefits

- Energy consumption reduced by 36.7% over ASHRAE 90.1-1999 standards.
- Simple payback for LEED upgrades is 9.6 years (2001 rates).
- Reduced sanitary landfill wastes.
- Reduced consumption of natural resources.
- Ensures Proper operation of HVAC systems.